

CLAIMS:

What is claimed is:

1. An optical assembly comprising:

5 a platform for supporting a semiconductor device that includes a vertical cavity laser, the platform electrically coupling the semiconductor device to signals; and

a ferrule having an optical fiber therein and a mating end with angled ferrule and fiber surfaces that are coplanar and with mating surfaces that engage end surfaces of the platform to align the laser relative to the fiber so that the laser is positioned to project a beam into the fiber for reflection off of the angled surface and propagation along the fiber.

10 2. The assembly according to claim 1, further comprising:

a monitoring diode supported by and electrically coupled to the platform, the monitoring diode being positioned to receive portions of the beam transmitted through the angled surface of the fiber.

15 3. The assembly according to claim 1, further comprising:

a sleeve holding the ferrule; and

a housing including a passageway for engaging the sleeve and a cavity for enclosing the mating end of the ferrule and the platform.

20 4. The assembly according to claim 3, wherein the signals are coupled to the semiconductor device along leads supported by the platform.

5. The assembly according to claim 4, wherein the housing includes a slot through which the leads protrude.

6. The assembly according to claim 5, wherein the housing comprises a housing portion and a cap portion,

the housing portion including a passageway opening to mating walls defining at least a portion of the cavity; and

the cap portion including a slot wall defining the slot and opposing mating walls for mating with the mating walls, the opposing mating walls engaging the mating walls to enclose the cavity.

7. The assembly according to claim 6, further comprising epoxy within the slot that secures the leads.

8. The assembly according to claim 7, wherein the epoxy has a low dielectric constant.

9. The assembly according to claim 1, further comprising an inductor element electrically coupled to the platform.

10. The assembly according to claim 9, wherein the platform includes signal traces along a mounting surface for coupling signals to the semiconductor device, the signal traces being positioned to define a region without signal traces upon which to position the inductor.

11. A method of making an optical assembly, comprising:

providing a ferrule with an internal longitudinal hole;

securing an optical fiber within the longitudinal hole;

machining the ferrule and the fiber to create a coplanar angled surface;

5 machining the ferrule to create mating surfaces for engaging a platform and positioning the fiber relative to a device on the platform to permit the device to transmit a light beam into the fiber that reflects off of the angled surface of the fiber and propagates along the fiber.

12. The method according to claim 11, further comprising:

10 coating the angled surface with a dielectric material.

13. The method according to claim 12, wherein the dielectric material is polyamide.

14. The method according to claim 12, wherein the dielectric material is acrylic.

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